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L8: Entry 42 of 44 File: DWPI Feb 14, 1981

DERWENT-ACC-NO: 1981-24573D
DERWENT-WEEK: 198114

TITLE: Prepn. of hard butter for chocolate mfr. - from 2-oleo-di:stearin and 2-oleo-di:palmitine using lipase

PATENT-ASSIGNEE:

ASSIGNEE	CODE
FUJI OIL CO LTD	FUKO

PRIORITY-DATA: 1979JP-0091275 (July 17, 1979)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 56015643 A	February 14, 1981		000	
JP 82028519 B	June 17, 1982		000	

INT-CL (IPC): A23D 3/00; A23D 5/00; C11C 3/10

ABSTRACTED-PUB-NO: JP56015643A
BASIC-ABSTRACT:

The method is characterised by ester-exchanging the mixed oil and fat which is prepared by combining the major components of 2-oleodistearin (I) and 2-oleodipalmitin (II) so that the proportion between constituting fatty acid groups, that is, palmitic acid:stearic acid is 0.4-1:1, in the reaction system of moisture content below 0.2 w/w% using the lipase showing 1,3-position specificity.

The starting mixed oil and fat has triglyceride content above 90% pref. above 93%. The lipase is that produced by Rhizopus niveus, R. japonicus, Mucor japonicus, Aspergillus niger, etc., pancreatic lipase, rice bran lipase, etc. can be used. The lipase is used 0.1-10 w/w% on the starting material and the enzymic ester exchange reaction is practiced at 20-60 deg.C for 10-48 hours.

Though the hard butter mainly of (I) and (II) has been widely used as the substitute for cacao fat, the chocolate prepared with it has been inferior to that prepared with cacao butter in thermal resistance, melting property in mouth, etc. By (a) controlling the composition of structuring fatty acids in starting oil and fat, (b) controlling the moisture content in the reaction system and (c) using the special lipase, the hard butter which is equal to cacao butter can be obtained.

TITLE-TERMS: PREPARATION HARD BUTTER CHOCOLATE MANUFACTURE OLEO DI STEARIN OLEO DI LIPASE

DERWENT-CLASS: D13

CPI-CODES: D03-C; D03-E07;

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L8: Entry 38 of 44 File: DWPI Jan 8, 1993

DERWENT-ACC-NO: 1993-049796
DERWENT-WEEK: 199718

TITLE: Prepn. of whitening resistant fat compsn. for prodn. of curry roux - by ester exchanging fat and oil derived from palm oil and fatty acid contg. higher satd. fatty acid gp.

PATENT-ASSIGNEE:

ASSIGNEE	CODE
FUJI OIL CO LTD	FUKO

PRIORITY-DATA: 1991JP-0181880 (June 25, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 05001297 A	January 8, 1993		004	C11C003/10
JP 2503811 B2	June 5, 1996		004	C11C003/10

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP05001297A	June 25, 1991	1991JP-0181880	
JP 2503811B2	June 25, 1991	1991JP-0181880	
JP 2503811B2		JP 5001297	Previous Publ.

INT-CL (IPC): A23D 9/00; A23D 9/007; A23L 1/39; A23L 1/40; C11C 3/10

ABSTRACTED-PUB-NO: JP05001297A
BASIC-ABSTRACT:

Fat and oil derived from palm oil and a fatty acid having a 22C satd. fatty acid gp. or its deriv. are ester-exchanged.

The deriv. of the acid is pref. at least one of fatty acid esters, triglycerides and alcohols. Pref. the compsn. has a compsn. of fatty acids contg. 35-55wt.% 16C satd. fatty acid gps. and 1-10wt.% 22C satd. fatty acid gps..

Pref., the ester exchange is effected e.g., with a metal catalyst, such as sodium methylate, or a lipase. The lipase includes Rhizopus, Aspergillus, Mucol, pancreatic and rice bran lipases. The enzymes are used in supported form. The support include diatomaceous earth, alumina and activated charcoal.

USE/ADVANTAGE - The compsn. is resistant to whitening and is esp. useful for a curry roux.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: PREPARATION WHITE RESISTANCE FAT COMPOSITION PRODUCE CURRY ROUX ESTER EXCHANGE FAT OIL DERIVATIVE PALM OIL FATTY ACID CONTAIN HIGH SATURATE FATTY ACID GROUP

DERWENT-CLASS: D13 D23

L10: Entry 10 of 14 File: USPT Dec 12, 1989

DOCUMENT-IDENTIFIER: US 4886750 A
TITLE: Process for the preparation of a pharmaceutically active compound in a stereospecific form of the formula

Detailed Description Paragraph Right (35):
The final solution was analyzed on a preparative HPLC-SEC (size-exclusion chromatography) column (TSK 2000 SW, 600.times.21.5 mm) eluted with 0.1M sodium acetate pH 5.5 at a flow rate of 6 ml/min. From 10 minutes on column fractions of 2 ml were collected and tested for the presence of lipase and S-naproxen methyl esterase activity.

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L8: Entry 39 of 44 File: DWPI May 3, 1988

DERWENT-ACC-NO: 1988-140031
DERWENT-WEEK: 198820

TITLE: Rice bran extrusion to reduce decomposition - using auger with inclined agitator bars at downstream end, rotated by DC motor

INVENTOR: MCPEAK, D L

PATENT-ASSIGNEE:

ASSIGNEE	CODE
BRADY INT INC	BRADN

PRIORITY-DATA: 1986US-0859452 (May 5, 1986)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 4741264 A	May 3, 1988		009	
CN 1040494 A	March 21, 1990		000	
CN 1040495 A	March 21, 1990		000	
CN 8607712 A	November 18, 1987		000	

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
US 4741264A	May 5, 1986	1986US-0859452	

INT-CL (IPC): A23K 1/14; A23K 3/00; A23L 1/20; A23P 1/12

ABSTRACTED-PUB-NO: US 4741264A
BASIC-ABSTRACT:

Rice bran is processed in an extruder which heats the bran. The extruder has a rotor whose free end projects beyond a shell at its downstream region where a conical extrusion aperture is defined between the rotor and shell. The rotor has at least four turns to its flights. It also has at least 12 agitator bars attached to its downstream end. The agitator bars are angled to the axis of the rotor but at a smaller angle than that of the flights.

The rotor is driven by a direct current motor connected via a clutch which slips when a predetermined torque is applied. Typically the motor rotates at 885 rpm at a power of 75 hp.

USE/ADVANTAGE - The appts. heats rice bran to inactivate lipase and destroy bacteria and stabilise free acid in the bran. The life of the bran is extended by the treatment.

CHOSEN-DRAWING: Dwg.0/3

TITLE-TERMS: RICE BRAN EXTPUDE REDUCE DECOMPOSE AUGER INCLINE AGITATE BAR DOWNSTREAM END ROTATING DC MOTOR

WEST

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L8: Entry 37 of 44 File: DWPI Jan 18, 1996

DERWENT-ACC-NO: 1993-046911
DERWENT-WEEK: 199608

TITLE: Prepn of hard stocks for use in margarine and shortening - by allowing lipase to act on mixt. of palm type oils, lauric type oils and behenic acid (ester(s))

INVENTOR: EBIHARA, Y; MIYABE, M ; NAGOH, A

PATENT-ASSIGNEE:

ASSIGNEE	CODE
FUJI OIL CO LTD	FUKO

PRIORITY-DATA: 1991JP-0194857 (July 8, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 69206512 E	January 18, 1996		000	A23D007/00
EP 526980 A1	February 10, 1993	E	011	A23D007/00
JP 05345900 A	December 27, 1993		005	C11C003/10
US 5304477 A	April 19, 1994		005	C12P007/64
EP 526980 B1	December 6, 1995	E	011	A23D007/00

DESIGNATED-STATES: BE DE GB NL BE DE GB NL

CITED-DOCUMENTS:2.Jnl.Ref; EP 151450 ; EP 170431 ; EP 427309 ; FR 2570388 ; JP57074041 ; JP58094345 ; US 3949105 ; 02Jnl.Ref

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
DE69206512E	June 26, 1992	1992DE-0606512	
DE69206512E	June 26, 1992	1992EP-0305918	
DE69206512E		EP 526980	Based on
EP 526980A1	June 26, 1992	1992EP-0305918	
JP05345900A	July 8, 1991	1991JP-0194857	
US 5304477A	July 2, 1992	1992US-0907850	
EP 526980B1	June 26, 1992	1992EP-0305918	

INT-CL (IPC): A23D 7/00; C11C 3/10; C12N 1/14; C12N 9/20; C12P 7/64

ABSTRACTED-PUB-NO: EP 526980A
BASIC-ABSTRACT:

Prodn. of hard stocks comprises allowing a lipase to act on a mixt. of palm type oils, lauric type oils, and behenic acid (or esters of these) for interesterification.

Pref. mixt. has a fatty acid compsn. of lauric acid (6-25%), palmitic acid (23-48%) and behenic acid (0.5-5%). The palm type oils are selected from palm oil, fractionated oils, and hardened oils of these. The lauric type oils are selected from palm kernel

oil, coconut oil, babassu oil, fractionated oils, or hardened oils thereof. The lipase is selected from lipases derived from the genus Rhizopus, Aspergillus or Mucor, pancreatic lipase and rice bran lipase.

USE/ADVANTAGE - The hard stocks produced are useful as raw materials for plastic fat prods. such as margarine and shortening. The starting materials for the process are abundant and inexpensive. Using the process it is possible to (a) prevent exudation of liquid oils contained in the prods. with temp. increase, (b) inhibit a rise in the m.pt. caused by an increase in the amt. of tri-satd. triglycerides, and (c) to solve the problem of product-hardening over long-term stora
ABSTRACTED-PUB-NO:

EP 526980B
EQUIVALENT-ABSTRACTS:

A process for producing hard fats comprising reacting a 1,3-specific lipase with a mixt. of an oil having a palmitic acid content of at least 30%, an oil having a lauric acid content of at least 30% and free behenic acid or its ester with a monohydric or polyhydric alcohol, the mixt. having a fatty acid compsn. of 6-25% lauric acid, 23-48% palmitic acid and 0.5-5% behenic acid, based on the wt. of the mixt. to produce the hard fat and recovering the hard fat.

US 5304477A

Prodn. of hard fits comprises reacting a 1,3-specific lipase with a mixt. of an oil with a palmitic acid content of at least 30%, an oil with a lauric acid content of at least 30%, and free behenic acid or its ester with a mono- or polyhydric alcohol. The mixt. comprises a fatty acid compsn. of 6.25% lauric acid, 23-48% palmitic acid and 0.5-5% behenic acid, based on the wt. of the mixt. to produce the fat and recover it. The lipase is obtd. from a microorganism of the genus Rhizopus, Aspergillus or Mucor or the lipase in a pancreatic lipase or rice bran lipase.

USE/ADVANTAGE - Hard stocks have been produced with excellent characterist ics for use as raw materials of plastic fat prods. such as margarine and shortening.

CHOSEN-DRAWING: Dwg.0/0 Dwg.0/0 Dwg.0/0

TITLE-TERMS: PREPARATION HARD STOCK MARGARINE SHORTENING ALLOW LIPASE ACT MIXTURE PALM TYPE OIL LAURIC TYPE OIL BEHENIC ACID ESTER

DERWENT-CLASS: D13 D16 D23

CPI-CODES: D03-C;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0121U; 1147U

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1993-021119

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L10: Entry 4 of 14 File: USPT Jan 5, 1999

DOCUMENT-IDENTIFIER: US 5856451 A
TITLE: Method for reducing respiratory allergenicity

Detailed Description Paragraph Right (260):
25 mg of Candida antarctica lipase B in 25 ml of 0.1 M borate, 1M NaCl, pH 9.2, was incubated with 2.82 gram of mPEG 15.000 activated with Tresyl chloride according to Example 2 for 3 hours at ambient temperature. The reaction was stopped by addition of 1 ml 2M Glycine and the derivative purified by size-exclusion chromatography (Spherogel TSK-G2000 SWG).

WEST

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L10: Entry 3 of 14 File: USPT Nov 9, 1999

DOCUMENT-IDENTIFIER: US 5981718 A
TITLE: Polypeptide with reduced allergenicity

Detailed Description Paragraph Right (274):
25 mg of Candida antarctica lipase B in 25 ml of 0.1 M borate, 1 M NaCl, pH 9.2, was incubated with 2.82 gram of mPEG 15.000 activated with Tresyl chloride according to Example 2 for 3 hours at ambient temperature. The reaction was stopped by addition of 1 ml 2M Glycine and the derivative purified by size-exclusion chromatography (Spherogel TSK-G2000 SWG).

WEST

End of Result Set

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L10: Entry 14 of 14 File: EPAB Nov 28, 1995

DOCUMENT-IDENTIFIER: US 5470741 A
TITLE: Mutant of Geotrichum candidum which produces novel enzyme system to selectively hydrolyze triglycerides

Abstract (1):
A mutant fungal strain, namely G. candidum NRRL Y-552, mutant known as Henkel 9-2-3-9 (ATCC 74170) produces a lipase called "UNLipase" providing a selectivity of 25:1 for oleic acid over palmitic acid by the assay procedure employed. UNLipase has a temperature range of operation of between 0 and 40 degrees Celsius (and no activity over 55 degrees Celsius). The optimum pH ranges are between 7.5 and 8.5. Magnesium cations increase activity, whereas calcium cations are inhibitory. The molecular weight of the protein appears to be 65 kDa by size exclusion chromatography. UNLipase shows a high degree of selectivity for hydrolysis, esterification and transesterification.

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Term: l2 same l9

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Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ			
L10	l2 same l9	14	L10
L9	size exclusion chromatography	4514	L9
L8	l1 near5 l2	44	L8
L7	l1 near10 l2	63	L7
L6	l1 5a l2	0	L6
L5	l4 and l2	6	L5
L4	benzene boronic acid	87	L4
L3	l1 same l2	98	L3
L2	lipase	14676	L2
L1	rice bran	6073	L1

END OF SEARCH HISTORY

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=> d his

     (FILE 'HOME' ENTERED AT 16:49:33 ON 24 JUN 2002)

     FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 16:49:59 ON 24 JUN 2002
L1            48 S BENZENE BORONIC ACID?
L2         88043 S LIPASE?
L3            15 S L1 AND L2
L4            10 DUP REM L3 (5 DUPLICATES REMOVED)

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NEWS 2	Jan 25	BLAST(R) searching in REGISTRY available in STN on the Web
NEWS 3	Jan 29	FSTA has been reloaded and moves to weekly updates
NEWS 4	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6	Mar 08	Gene Names now available in BIOSIS
NEWS 7	Mar 22	TOXLIT no longer available
NEWS 8	Mar 22	TRCTHERMO no longer available
NEWS 9	Mar 28	US Provisional Priorities searched with P in CA/CAplus and USPATFULL
NEWS 10	Mar 28	LIPINSKI/CALC added for property searching in REGISTRY
NEWS 11	Apr 02	PAPERCHEM no longer available on STN. Use PAPERCHEM2 instead.
NEWS 12	Apr 08	"Ask CAS" for self-help around the clock
NEWS 13	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 14	Apr 09	ZDB will be removed from STN
NEWS 15	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 18	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 19	Jun 03	New e-mail delivery for search results now available
NEWS 20	Jun 10	MEDLINE Reload
NEWS 21	Jun 10	PCTFULL has been reloaded

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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FILE 'MEDLINE' ENTERED AT 16:49:59 ON 24 JUN 2002

=> s benzene boronic acid?
L1 48 BENZENE BORONIC ACID?

=> s lipase?
L2 88043 LIPASE?

=> s l1 and l2
L3 15 L1 AND L2

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 10 DUP REM L3 (5 DUPLICATES REMOVED)

=> d 1-10 ab, bib

L4 ANSWER 1 OF 10 CA COPYRIGHT 2002 ACS DUPLICATE 1
AB We have investigated the binding properties of and dynamics in Humicola lanuginosa **lipase** (Hll) and the inactive mutant S146A (active Ser146 substituted with Ala) using fluorescence spectroscopy and mol. dynamics simulations, resp. Hll and S146A show significantly different binding behavior for phosphatidylcholine (PC) and phosphatidylglycerol (PG) liposomes. Generally, higher binding affinity is obsd. for Hll than the S146A mutant. Furthermore, depending on the matrix, the addn. of the transition state analog **benzene boronic acid** increases the binding affinity of S146A, whereas only small changes are obsd. for Hll suggesting that the active site lid in the latter opens more easily and hence more **lipase** mols. are bound to the liposomes. These observations are in agreement with mol. dynamics simulations and subsequent essential dynamics analyses. The results reveal that the hinges of the active site lid are more flexible in the wild-type Hll than in S146A. In contrast, larger fluctuations are obsd. in the middle region of the active site loop in S146A than in Hll. These findings reveal that the single mutation (S146A) of the active site serine leads to substantial conformational alterations in the H. lanuginosa **lipase** and different binding affinities.
AN 129:213471 CA
TI Active Serine Involved in the Stabilization of the Active Site Loop in the

Humicola lanuginosa **Lipase**
AU Peters, G. H.; Svendsen, A.; Langberg, H.; Vind, J.; Patkar, S. A.; Toxvaerd, S.; Kinnunen, P. K. J.
CS Chemistry Department III H.C. Orsted Institutet, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Biochemistry (1998), 37(36), 12375-12383
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English

L4 ANSWER 2 OF 10 CA COPYRIGHT 2002 ACS
AB Incubation of smooth muscle cells (SMC) with increasing concn. of normolipidemic human very low-d. lipoproteins (N-VLDL) for 24 h has no effect on the lipid content of SMC; however, the cellular triglyceride (TG) and cholesteryl ester (CE) increased substantially after incubation for 48 or 72 h even with lower concentrations of VLDL. On the contrary, macrophage-conditioned media with comparable N-VLDL stimulated accumulation of TG and CE in SMC after 24 h incubation and this effect was concn.-dependent. **Benzene boronic acid** (BBA), a specific inhibitor of lipoprotein **lipase** (LPL), attenuated the deposition of TB in SMC, while heparin enhanced it. Addn. of oleate-albumin complex to the media had an effect similar to macrophage-conditioned media. With regard to the CE, BBA promoted while heparin decreased its accumulation in SMC incubated with macrophage-conditioned media. The authors suggest: (1) macrophages stimulate TG accumulation in SMC through the hydrolysis of VLDL-TG to free fatty acids, which are reesterified to TG in SMC; (2) Uptake of VLDL-CE by SMC is enhanced by macrophages through conversion of N-VLDl to its remnant or LDL.
AN 117:210004 CA
TI Macrophages stimulate the uptake of lipid in N-VLDL by rabbit aorta smooth muscle cells
AU Wang, Yanfeng; Wang, Shiping; Feng, Zhongchen; Jiang, Weiguo; Yuan, Fangmin
CS Dep. Biochem., Tongji Med. Univ., Wuhan, 430030, Peop. Rep. China
SO Shengwu Huaxue Yu Shengwu Wuli Xuebao (1992), 24(1), 33-9
CODEN: SHWPAU; ISSN: 0582-9879
DT Journal
LA Chinese

L4 ANSWER 3 OF 10 MEDLINE
AB Macrophages were incubated with 125I-VLDL for 5 h in presence or absence of lipoprotein **lipase** (LPL) inhibitor, **benzene boronic acid** (BBA). Both the uptake and degradation of 125I-VLDL by macrophages were saturable, and the uptake and degradation curves were virtually identical. When macrophages were incubated with 125I-VLDL for 10 h in presence of BBA, the uptake and degradation of 125I-VLDL were still saturable. However, in absence of BBA, the uptake and degradation were no longer saturable. The results suggest that with macrophages incubated with VLDL for a shorter period, VLDL was taken up predominantly via receptor pathway, with a longer period of incubation, LPL played a striking role in uptake of VLDL.

AN 91341857 MEDLINE
DN 91341857 PubMed ID: 1875451
TI Relationship of VLDL receptor and LPL in metabolism of VLDL by macrophage.
AU Deng Y Z; Feng Z C; Wang H X; Jiang W G; Zhong Y Q; Wang C F
CS Department of Biochemistry, Tongji Medical University, Wuhan.
SO JOURNAL OF TONGJI MEDICAL UNIVERSITY, (1991) 11 (1) 39-44.
Journal code: 8605495. ISSN: 0257-716X.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199109
ED Entered STN: 19911013
Last Updated on STN: 19911013
Entered Medline: 19910925

L4 ANSWER 4 OF 10 CA COPYRIGHT 2002 ACS DUPLICATE 2
AB Bile-salt-stimulated human milk **lipase** catalyzes both the hydrolysis of retinyl palmitate and the esterification of retinol by palmitic acid. The equil. const., K = 2.82 mM, obtained from the ratio of the rate consts. of these two reactions, favors the formation of the ester. Sodium taurocholate stimulates the enzyme-catalyzed hydrolysis reaction but has no effect on the enzyme-catalyzed acyl transfer reaction. **Benzene boronic acid** serves as an inhibitor of both reactions and is an excellent model for probing the active site of bile-salt-stimulated human milk **lipase**. The kinetic parameters have been evaluated and comparisons have been drawn between bile-salt-stimulated human milk **lipase** and other serine hydrolases.
AN 113:167868 CA
TI **Benzene boronic acid** inhibition of vitamin A-bile-salt-stimulated human milk **lipase** interactions
AU O'Connor, Charmian J.; Butler, Paul A. G.; Yaghi, Basma M.
CS Dep. Chem., Univ. Auckland, Auckland, N. Z.
SO J. Mol. Catal. (1990), 60(2), 255-65
CODEN: JMCADS; ISSN: 0304-5102
DT Journal
LA English

L4 ANSWER 5 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Resonance energy transfer has been used to identify the interaction of N-(5-dimethylaminonaphthalene-1-sulfonyl)-3-aminobenzene boronic acid (dansyl-**benzene boronic acid**) with bile-salt-stimulated human milk **lipase**, BSSL, and a binding constant Ka = 8.6 .times. 106 M-1 was measured. **Benzene boronic acid** competitively displaces dansyl-**benzene boronic acid** from the enzyme, Ki = 42 .mu.M. It is suggested that boronic acids may serve as useful probes for the active site of BSSL.
AN 1989:446881 BIOSIS
DN BA88:95153
TI N-5 DIMETHYLAMINONAPHTHALENE-1-SULFONYL-3-AMINOBENZENEBORONIC ACID AS AN ACTIVE-SITE-DIRECTED FLUORESCENT PROBE OF BILE-SALT-STIMULATED HUMAN MILK **LIPASE**.
AU O'CONNOR C J; YAGHI B M
CS DEP. CHEM., UNIV. AUCKLAND, PRIVATE BAG, AUCKLAND, NEW ZEALAND.
SO J MOL CATAL, (1989) 52 (3), 317-322.

CODEN: JMCADS. ISSN: 0304-5102.
FS BA; OLD
LA English

L4 ANSWER 6 OF 10 CA COPYRIGHT 2002 ACS
AB Culturing of isolated mouse peritoneal macrophages in the presence of rabbit very-low-d. lipoprotein (VLDL) caused a 6-16-fold increase in the macrophage content of triglycerides (TG). On addn. of **benzene boronic acid** (BBA), a lipoprotein **lipase** (LPL) inhibitor, the medium content of free fatty acids decreased and that of VLDL-TG increased, whereas the accumulation of TG in the cells was greatly diminished or completely suppressed. Thus, LPL appears to play an important role in macrophage metab. of VLDL-TG.
AN 111:75306 CA
TI The role of lipoprotein **lipase** in the metabolism of normal very-low-density lipoprotein by macrophages
AU Feng, Youmei; Wang, Shiping; Wu, Wansheng; Wang, Chunben; An, Chengren; Jiang, Weiguo; Feng, Zongchen
CS Dep. Biochem., Tongji Med. Univ., Wuhan, Peop. Rep. China
SO Shengwu Huaxue Zazhi (1989), 5(3), 255-9
CODEN: SHZAE4; ISSN: 1000-8543
DT Journal
LA Chinese

L4 ANSWER 7 OF 10 CA COPYRIGHT 2002 ACS DUPLICATE 3
AB The lipoprotein **lipase** (LPL) inhibitor **benzene boronic acid** (BBA) demonstrated that LPL plays a major role in the accumulation of triglycerides (TG) in mouse peritoneal macrophages exposed to rabbit normal very low d. lipoproteins (N-VLDL). There were less free fatty acids (FFA) and much more N-VLDL-TG left in the media contg. BBA than in the controls. TG accumulation in the cells was greatly diminished or even prohibited by BBA. Thus, LPL played a more important role than the receptor did in the uptake of N-VLDL-TG by mouse macrophages. The mechanisms of LPL action were discussed.
AN 111:229520 CA
TI The role of lipoprotein **lipase** in metabolism of normolipidemic very low density lipoprotein by macrophages
AU Wang, Shiping; Feng, Youmei; Feng, Zongchen; Wu, Wansheng; Wang, Chunben; An, Chengren; Jiang, Weiguo
CS Dep. Biochem., Tongji Med. Univ., Wuhan, Peop. Rep. China
SO J. Tongji Med. Univ. (1989), 9(1), 48-52
CODEN: JTMUEI; ISSN: 0257-716X
DT Journal
LA English

L4 ANSWER 8 OF 10 MEDLINE
AB Resonance energy transfer was used to monitor the interaction of an active-site-directed fluorescent inhibitor, N-(5-dimethylaminonaphthalene-1-sulfonyl)-3-aminobenzene boronic acid, and lipoprotein **lipase** (EC 3.1.1.34). The binding of this probe to the active site of lipoprotein **lipase** had an association constant, Ka, of 1.1 X 10(6) M-1, indicating a strong interaction. The binding was displaced competitively by **benzene boronic acid**. The method described provides a sensitive procedure to probe the active site of lipoprotein **lipase**.
AN 83283512 MEDLINE

DN 83283512 PubMed ID: 6882771
TI N-(5-dimethylaminonaphthalene-1-sulfonyl)-3-aminobenzene boronic acid as an active-site-directed fluorescent probe of lipoprotein **lipase**.
AU Vainio P
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1983 Aug 16) 746 (3) 217-9.
Journal code: 0217513. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198310
ED Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19831008

L4 ANSWER 9 OF 10 CA COPYRIGHT 2002 ACS DUPLICATE 4
AB The catalytic mechanism of triacylglycerol hydrolysis by lipoprotein **lipase** (I) was studied. I was inhibited by benzeneboronic acid (II) with an apparent Ki of 8.9 .mu.M at pH 7.4, indicating the presence of serine and histidine in the enzyme active site. Inhibition of I by II was apparently due to the formation of an inhibitor-enzyme complex having analogous bonding to the active site histidine and serine as the transition-state complex which precedes the formation of an obligatory acyl-enzyme intermediate. The presence of apolipoprotein C-II, the apolipoprotein activator of I, partly reversed the inhibition by II. This reversal by apolipoprotein C-II had a distinct pH optimum in the range 8-9.
AN 97:35268 CA
TI Inhibition of lipoprotein **lipase** by **benzene boronic acid**. Effect of apolipoprotein C-II
AU Vainio, Petri; Virtanen, Jorma A.; Kinnunen, Paavo K. J.
CS Dep. Med. Chem., Univ. Helsinki, Helsinki, SF-00170/17, Finland
SO Biochim. Biophys. Acta (1982), 711(3), 386-90
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal
LA English

L4 ANSWER 10 OF 10 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1981:111190 BIOSIS
DN BR21:46186
TI BINDING OF 7 NITROBENZO-2-OXA-1 3-DIAZOLYL-M-AMINO **BENZENE BORONIC-ACID** TO PANCREATIC **LIPASE** IN THE PRESENCE OF DETERGENT MICELLES.
AU GARNER C W
CS BIOCHEM. DEP., TEXAS TECH UNIV. HEALTH SCI. CENT. LUBBOCK, TX 79430.
SO 72ND ANNUAL MEETING OF THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, ST. LOUIS, MO., USA, MAY 31-JUNE 4, 1981. FED PROC. (1981) 40 (6), 1864.
CODEN: FEPRA7. ISSN: 0014-9446.
DT Conference
FS BR; OLD
LA English

=> d his

(FILE 'HOME' ENTERED AT 16:49:33 ON 24 JUN 2002)

FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 16:49:59 ON 24 JUN 2002
L1 48 S BENZENE BORONIC ACID?

L2	88043	S LIPASE?
L3	15	S L1 AND L2
L4	10	DUP REM L3 (5 DUPLICATES REMOVED)